

REMARKS

The specification has been amended to capitalize the names of brand names, trade names, and trademarks, and to provide the “TM” or “®” symbol if applicable. Claims 1-6, 9-12 and 13-16 have been withdrawn from further consideration as being drawn to a nonelected invention. Applicant notes that claims 9-12 were canceled in the preliminary amendment filed on June 10, 2009. Thus, their status is “canceled”, not “withdrawn.” Accordingly, claims 1-8 and 13-16 are pending in the present application, with claims 7 and 8 currently under consideration.

Objections to the specification

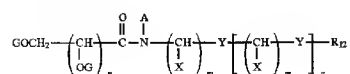
The examiner objected to the specification based on a spelling error on page 23, line 20 (word “lime”), and the use of trademarks which should be capitalized and accompanied by the generic terminology. The various trademarks, trade names and brand names in the specification have been capitalized, and designated by “TM” or “®” if appropriate. Applicants note that the specification as filed provided the generic terminology for all of these compounds/compositions, with the exception of SOLBASE. As noted in the amendment to the specification, SOLBASE is a 1:1 mixture of PEG-400 and PEG-4000.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the objections to the specification.

Rejection under 35 U.S.C. § 102(b)

Claim 7 was rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Vermeer (US 5,624,906).

Vermeer discloses an oral hygiene composition comprising a heteroatom containing alkyl aldonamide compound having the following structure:



a humectant, a cosurfactant and water (Claim 1).

Vermeer describes an oral hygiene composition that has excellent foaming characteristics, effective bottling and tube packaging, excellent stability upon standing, excellent taste, and is capable of suppressing gingivitis or periodontitis due to excellent deterative characteristics of

plaque and calculus on dental surfaces (column 9, lines 39 to 58). By using specified alkyl aldonamide compounds, improved foam, viscosity, and clarity can be achieved (column 3, line 35 to column 4, line 24). In addition, Vermeer discloses that humectants serve to add body or mouth feel to a mouthwash or dental rinse composition and retain moisture in a dentifrice composition, and further discloses, as examples of humectants, various polyethylene glycols, propylene glycol, glycerol (glycerin), erythritol, xylitol and the like and mixtures thereof. Thus, Vermeer discloses that humectants help prevent microbial deterioration during storage of oral hygiene composition, assist in maintaining phase stability and serve as additives to formulate a transparent or translucent dentifrice (column 17, line 60 to column 18, line 25), and further discloses that typical levels of humectants are from about 0 % to 5 % by weight of a composition.

The presently claimed treatment composition and method are capable of sufficiently suppressing pain caused to the subject, and the recurrence of bacterial intraoral diseases (see corresponding US Publication No. 2009/0142735, Paragraph [0016]). By administering the composition of present claim 7 to teeth, the composition diffuses and penetrates in tissue in which bacteria exists, thereby sterilizing the tissue. Accordingly, since the re-propagation of bacteria or fungi inside the teeth is prevented after the covering process, the recurrence of bacterial intraoral disease can be prevented. (Paragraphs [0140] and [0142]).

Present claim 7 recites: “A treatment composition for bacterial intraoral disease comprising an antibacterial agent having an antibacterial property against intraoral bacteria and a base containing polyethylene glycol 400, polyethylene glycol 600, polyethylene glycol 4000, and propylene glycol.” As discussed below, the presence of all three of these compounds is important.

Present claim 7 recites a specific combination of compounds, namely PEG-400, PEG-600, PEG-4000 and propylene glycol. Vermeer merely discloses a laundry list of various PEGs and other compounds in the paragraph bridging columns 17 and 18, and classified these as “humectants.” However, Vermeer does not disclose a specific combination of any of these compounds. Thus, Vermeer does not disclose the specific combination of compounds recited in present claim 7. Accordingly, claim 7 cannot be anticipated by this reference.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b).

Rejection under 35 U.S.C. § 103(a)

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Vermeer (US 5,624,906). In the Office Action, the Examiner alleges that "it would have been obvious to one skilled in the art to use teachings of Vermeer concerning a broad range for the PEG with various polymerization degrees in order to formulate composition with desired properties".

Although Vermeer discloses that using PEG, PG and mixtures thereof as humectants, there is nothing in the Vermeer that suggests the combined use of PEG-400, PEG-600, PEG-4000 and propylene glycol, or the beneficial effects obtained when this particular combination is used. Not only does Vermeer not disclose the specific combination of compounds recited in present claim 7, it would not be obvious to choose this specific combination since the combination results in enhanced penetration of the composition into a tooth, as evidenced by the enclosed Rule 132 declaration.

The data presented in Tables 1 and 2 of Experiment 1 of the Rule 132 Declaration demonstrate that the penetration of Sample Nos. 2, 5, and 6 that solely employ propylene glycol, PEG-600 or glycerin, respectively, is extremely inferior to that of Samples Nos. 3 and 4. As noted in the Declaration at paragraph 5, the combination of PEG-400, PEG-4000 and PG, as well as PEG-4000 and PG, both possess excellent penetrability, while PG alone, PEG-600 alone, and glycerin alone all possess poor penetrability.

As noted in the Declaration at paragraph 6, and in Fig. 2, the tooth penetration of a base including PEG-400, PEG-600, PEG-4000 and propylene glycol as recited in present claim 7 is superior to that exhibited with a base including PEG-400, PEG-4000 and PG (which lacks PEG-600). This can be seen in Figure 2, in which the tooth on the left was treated with a base containing PEG-400, PEG-4000 and PG, and in which the tooth on the right was treated with PEG-400, PEG-600, PEG-4000 and propylene glycol. The two compositions also included red food color so that penetration of each composition into the tooth could be visualized. The base containing PEG-400, PEG-600, PEG-4000 and propylene glycol penetrated to the tip of the tooth, whereas the base containing PEG-400, PEG-4000 and propylene glycol exhibited significantly less penetration. Although Fig. 2 as submitted is not in color, the staining by the red food color is clearly visible as the darker area on the teeth.

This result is quite unexpected in view of the poor penetrability of PEG-600 alone. This unexpected result is neither disclosed nor suggested by Vermeer, could not have been predicted based on this reference, and strongly supports the nonobviousness of the present claims. Thus, claim 7, as well as claim 8 which depends on claim 7, are not obvious over Vermeer.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

Request for rejoinder

Claims 1-6 and 13-16 are dependent on at least one of the elected claims. Accordingly, in accordance with M.P.E.P. 821.04, Applicants request rejoinder and examination of these claims upon allowance of the elected claims (7 and 8).

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

Appl. No. : 10/583,500
Filed : June 19, 2006

Applicants submit that all claims are in condition for allowance. However, if minor matters remain, the Examiner is invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

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Dated: November 9, 2009

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